

Appln. No. 09/775,677
Amdt dated May 30, 2003
Reply to Office action of August 28, 2002

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A device for treatment of mitral annulus dilatation, comprising an elongate body having such dimensions as to be insertable into the coronary sinus and having two states, in a first of which the elongate body has a shape that is adaptable to the shape of the coronary sinus, and to the second of which the elongate body is transferable from said first state assuming a reduced radius of curvature, whereby the radius of curvature of the coronary sinus is reduced as well as the circumference of the mitral valve annulus, when the elongate body is positioned in the coronary sinus, said elongate body comprising a distal stent section, a proximal stent section and control wires for reducing the distance between the distal and proximal stent sections.

2. (Original) The device of claim 1, wherein said control wires comprise a first wire and means for guiding said first wire in a course extending two times between the distal and proximal stent sections, when the distance therebetween is at a maximum, and extending at least three times between the distal and proximal stent sections, when the distance therebetween is at a minimum.

3. (Currently Amended) The device of claim 2, wherein said guiding means comprises a first eyelet fixed to one of the distal and proximal stent sections, a second eyelet fixed to the other of the distal and proximal stent sections, and a third eyelet positioned between the distal and proximal stent sections, said first wire having a first end fixed to said one of the distal and proximal stent section

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and extending therefrom via the third eyelet, the first eyelet and the second eyelet back to the third [eylet] eyelet where a second end of the first wire is fixed.

4. (Original) The device of claim 3, wherein said first eyelet is fixed to the distal stent section and said control wires comprise a second wire extending through the third eyelet and as a double wire proximally therefrom out of the coronary sinus and out of the human body.

5. (Original) The device of claim 4, wherein said control wires comprise a third wire extending through the third eyelet and as a double wire distally to and through the first eyelet and then as a double wire proximally therefrom out of the coronary sinus and out of the human body.

6. (Original) The device of claim 3, wherein said first eyelet is fixed to the proximal stent section and said control wires comprise a second wire extending through the third eyelet and as a double wire distally to and through the first eyelet and then as a double wire proximally therefrom out of the coronary sinus and out of the human body.

7. (Original) The device of claim 6, wherein said control wires comprise a third wire extending through the third eyelet and as a double wire proximally therefrom out of the coronary sinus and out of the human body.

8. (Original) The device of claim 4, wherein said first eyelet is fixed to the distal stent section and said control wires

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comprise a single wire having an end releasably fixed to the third eyelet and extending proximally therefrom out of the coronary sinus.

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10. (Original) The device of claim 1, wherein the wires extend between the stent sections in courses offset radially from a longitudinal axis of the stent sections.

11. (Original) The device of claim 1, wherein a cover encloses the wires in their courses between the distal and proximal stent sections.

12. (Original) The device of claim 11, wherein the cover comprises one or more plastic sheaths.

13. (Original) The device of claim 11, wherein the cover comprises one or more helical wires.

C4 14. (Currently Amended) A device for treatment of mitral annulus dilatation, comprising an elongate body having such dimensions as to be insertable into the coronary sinus and having two states, in a first of which the elongate body has a shape that is adaptable to the shape of the coronary sinus, and to the second of which the elongate body is transferable from said first state assuming a reduced radius of curvature, whereby the radius of curvature of the coronary sinus is reduced as well as the circumference of the mitral valve annulus,

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when the elongate body is positioned in the coronary sinus, said elongate body comprising at least one stent section at a distance from each end of the elongate body, said at least one stent section providing a reduction of its length when expanded in situ in the coronary sinus, whereby the elongate body is shortened and bent to a smaller radius of curvature.

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15. (Currently Amended) The device of claim 14, wherein the at least one stent section is a central stent section of the elongate body, the central stent section located between [comprises] a distal stent section[-] and a proximal stent section of the elongate body [and a central stent section,] the distal and proximal stent sections being expandable prior to the central stent section.

16. (Original) The device of claim 15, wherein the distal and proximal stent sections are expandable without substantial length reduction.

17. (Original) The device of claim 14, wherein a memory material is used as stent material.

Claims 18-20 (withdrawn)

21. (Cancelled)

22. (Currently Amended) A medical device for remodeling an extravascular tissue structure adjacent to a vessel in a patient, comprising:

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an elongate body extending between a proximal end and a distal end, and that is adjustable between a first configuration having a first shape such that the elongate body is adapted to be delivered at

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least in part into the vessel and a second configuration having a second shape such that the elongate body is adapted to exert a force from within the vessel onto the extravascular tissue structure in order to remodel the extravascular tissue structure, and

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[as in Claim 21,] wherein the elongate body is adapted to be positioned in the first configuration at least in part within a coronary sinus and is adapted to remodel a mitral valve annulus adjacent to the coronary sinus when the elongate body is located at least in part within the coronary sinus and is adjusted to the second configuration.

23. (Cancelled)

24. (Previously Added) A medical device as in Claim 22, wherein the elongate body is selectively adjustable between the first and second configurations while the elongate body is located at least in part within the coronary sinus, and is adapted to be temporarily implanted at least in part within the coronary sinus in the second configuration for temporary remodeling of the mitral valve annulus and to be thereafter removed from the coronary sinus in the first configuration.

25. (Previously Added) A medical device as in Claim 22, wherein the elongate body within the coronary sinus comprises a substantially similar length between the first and second configurations.

26. (Previously Added) A medical device as in Claim 22, wherein the elongate body within the coronary sinus is relatively non-expandable while the elongate body is adjusted between the first and second configurations.

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27. (Previously Added) A medical device as in Claim 22, wherein the elongate body within the coronary sinus is relatively non-compressible while the elongate body is adjusted between the first and second configurations.

28. (Cancelled)

29. (Previously Added) A medical device as in Claim 22, further comprising a lock for retaining the elongate body in the second configuration at least in part within the coronary sinus.

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30. (Currently Amended) A medical device as in Claim 22, wherein in the second configuration the second shape for the elongate body at least in part within the coronary sinus defines an arc.

31. (Previously Added) A medical device as in Claim 30, wherein a best fit constant radius curve corresponding to the arc has a radius within the range of from about 10 mm to about 20 mm.

32. (Previously Added) A medical device as in Claim 22, further comprising an anchor for retaining the elongate body at least in part within the coronary sinus.

33. (Previously Added) A medical device as in Claim 32, wherein the anchor comprises a region along a distal portion of the elongate body.

34. (Previously Added) A medical device as in Claim 32, wherein the anchor comprises a friction enhancing surface for engaging a wall of the coronary sinus.

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35. (Previously Added) A medical device as in Claim 32, wherein the anchor comprises at least one barb for piercing a wall of the coronary sinus.

36. (Previously Added) A medical device as in Claim 32, wherein the anchor is located at least in part at the proximal end of the elongate body.

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37. (Currently Amended) A medical device as in Claim [21] 22, wherein the ~~[adjacent tissue structure]~~ mitral valve annulus has a wall that circumscribes a space having a diameter, and the elongate body when adjusted from the first configuration to the second configuration within the ~~[body space]~~ coronary sinus is adapted to compress the ~~[adjacent issue structure]~~ mitral valve annulus to thereby reduce ~~[its diameter]~~ the diameter of said space.

38. (Previously Added) A medical device as in Claim 22, further comprising:

a deployment system cooperating with the elongate body and which is adapted to at least in part deliver the elongate body in the first configuration at least in part into the coronary sinus.

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39. (Currently Amended) A medical device as in claim 38, wherein the deployment system comprises a delivery member that is coupled to the elongate body and is adapted to advance the ~~[elongated]~~ elongate body into the coronary sinus.

40. (Currently Amended) A medical device for remodeling a tissue structure adjacent to a body space that is defined at least in part by a tissue wall in a patient, comprising:

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an elongate body extending between a proximal end portion and a distal end portion and that is adjustable between a first configuration having a first shape that is adapted to be delivered at least in part into the body space and a second configuration having a second shape that is adapted at least in part to exert a force from within the body space onto the adjacent tissue structure in order to remodel the adjacent tissue structure, wherein the elongate body is adapted to be positioned in the first configuration at least in part within a coronary sinus and is adapted to remodel a mitral valve annulus adjacent to the coronary sinus when the elongate body is located at least in part within the coronary sinus and is adjusted to the second configuration.

Claims 41-73 (Withdrawn)

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74. (Currently Amended) A medical device as in claim 39, wherein the [elongated] elongate body is pre-formed into an arcuate shape in the second configuration such that when advanced by a delivery member into the coronary sinus it assumes its pre-formed arcuate second configuration to apply force to remodel the mitral valve annulus.